

ABSTRACT OF THE DISCLOSURE

The object of the present invention is to provide an artificial lattice multilayer film medium having both the excellent signal-noise ratio (S/N) and the high coercive force and demagnetization resistance by reconciling the reduction of transition noise and the high magnetic anisotropy, and a magnetic storage device having a high S/N and a high demagnetization resistance even at a high areal recording density by using the artificial lattice multilayer film medium. The magnetic recording medium of the present invention is a magnetic recording medium comprising at least a soft magnetic layer, a seed layer and a recording layer having a multilayer film structure comprising alternately laminated Co and Pd, these layers being successively laminated on a nonmagnetic substrate, where the recording layer comprises an aggregate of fcc crystal grains, the average value of (111) interplanar spacing of the fcc crystals is not more than 2.25 Å, and the recording layer additionally contains B in such an amount as satisfying  $0.07 \leq \text{concentration of B atom} / (\text{concentration of Pd atom} + \text{concentration of B atom}) \leq 0.15$ .